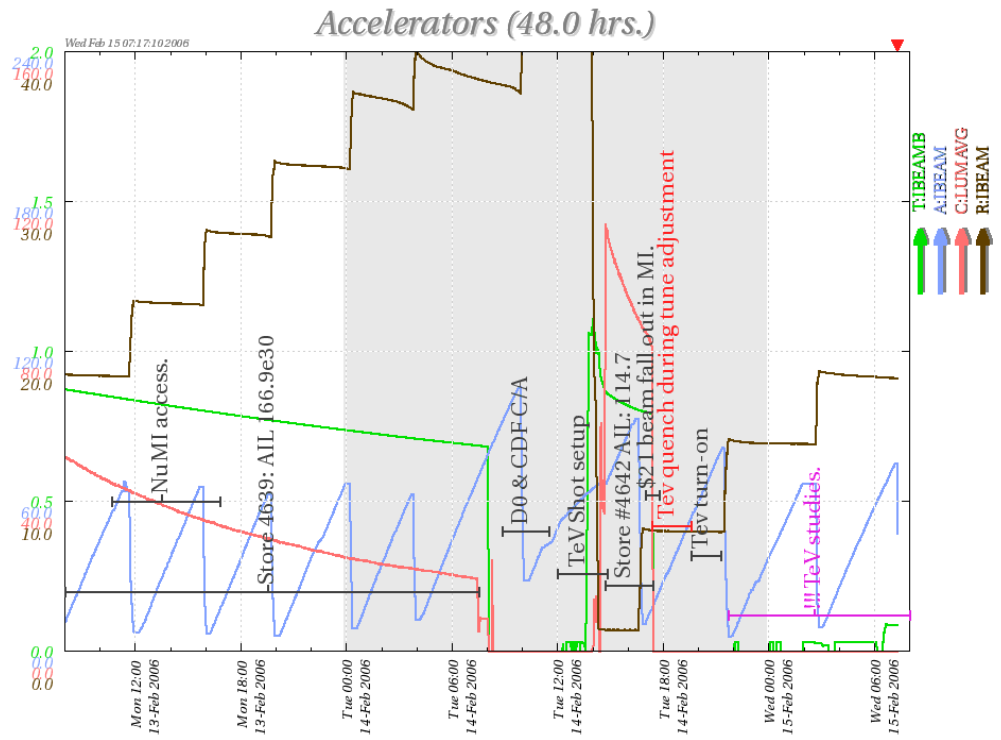
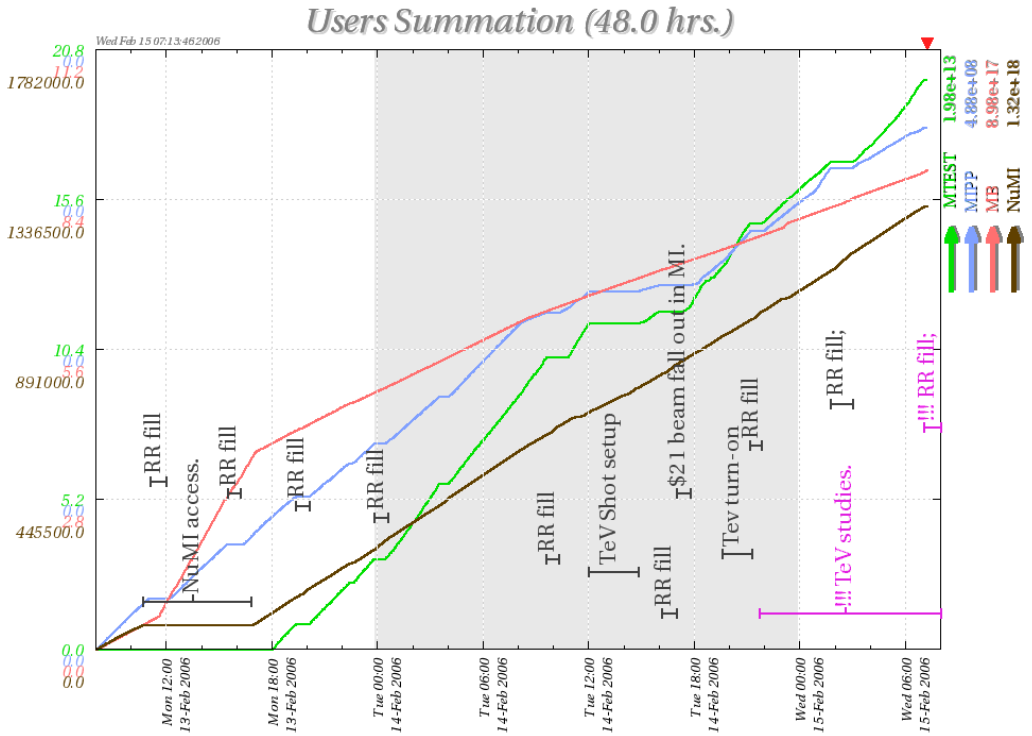
2006-02-15 Integration Scheduling Meeting

Wednesday, February 15, 2006
8:02 AM

- **Crew Chief Summary:**





- **Notes from Integration:**
  - Attempt at large store was not successful; however, we were able demonstrate more than 400e10 in the Recycler.
  - Setup for 1x1 store for FPD personnel
  - Pbar studies in parallel.

- **Machine Summaries**:
  - **Linac**
    - Summary:
      - Tuned up Monday after switching to H- source
      - Buncher phase was off peak.
      - Will look at losses today
      - LRF5 7835 is on the radar. Filament current had to be raised to over 6900A.
    - Requests:
      - Let up I- to take the source out and clean it. Someone has to steer when it is going down and coming back up.
  - **Booster**
    - Summary:
      - Running 84%
      - IP52 tripped on the owl shift. Running 50-60 deg C
    - Requests:
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  - **Main Injector**
    - Summary:
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    - Requests:
      - Go back to mid-level RF. Requires a reboot of MILLRF.
      - Lambertson studies that require Pbar beam.
  - **Pbar**
    - Summary:
      - Pbar Stacking Numbers
        - Today:
          - Best Stacking = 17.47 mA/hr at at Tue Feb 14 06:50:59 CST 2006
          - ZSSR 16.25 mA/hr Best: 18.20 mA/hr on 2/11/06
          - Average Production 15.14 e-6/proton Best: 18.23 e-6/proton on 05/08/2003
        - Yesterday:
          - Most in an hour: 18.60 mA at Tue Feb 14 01:45:34 CST 2006
          - ZSSR 16.43 mA/hr Best: 18.20 mA/hr on 02/11/2006
          - Average Production 16.23 e-6/proton Best: 18.23 e-6/proton on 05/08/2003
      - A new version of P153 (ARF1 Curve Loader) today. The differences are:
        - The Auto Load feature was removed (Dr Dave requested this).
        - Important ARF1 parameters have been added to the window so things can be read back and set without having to use P8.
        - The digital status fields for A:R1HLSC, A:R1H1SC, & A:R1H2SC allow you to see the status and are active interrupt fields so ARF1 can be turned On / Off / Reset from P153.
        - Just like a parameter page, GREEN fields are readings, YELLOW fields are settings, and MAGENTA fields are initial settings. The MAGENTA settings can be restored by interrupting on them.
      - Two new ramped power supplies for AP1 quads (M:Q104, M:Q106)
      - QS732 shunt failed. Repair requires tunnel access.
    - Requests:
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  - **Tevatron**

- Summary:
  - Store 4639 had some losses at CDF and D0 during the squeeze.
    - Based on this and the tune tracker we moved the horizontal tune up during this part of the squeeze.
    - We did some F0 stripline tune measurements at the end of the store and they found a bug in the programming.
  - Store 4642 was supposed to be the record breaker, but the Tevatron had problems at 150 GeV.
    - The lifetimes at 150 Gev have been a problem. As usual the proton lifetime deteriorated after we began loading pbars.
    - In an effort to improve the lifetime experts moved the horizontal tune up by 0.001 and we saw the beam go coherent, we blew up the emittances, and the proton lifetime was really poor. This was the main reason for the lower luminosity.
    - Store 4642 was lost prematurely when the ops were adjusting the pbar tunes during the normal during store tune adjustment. The operator inadvertently adjusted the tunes too much causing losses which quenched us. I am not sure how we can prevent this in the short term.
  - Based on store 4642, experts made the following adjustments.
    - Smoothed the orbits.
    - Increased the horizontal tune during the squeeze. This may help losses at CDF and D0 during the squeeze.
    - Increased the chromaticity on the open helix ramp to avoid instability again.
  - The long term fix for the poor 150 GeV lifetime might be the "5-star" helix, but this is probably not likely before the shutdown since it requires shifts of tune-up after implementing.
  - During the night we did some Tevatron studies:
    - Worked on the IPM and AC dipole measurement. Found some bugs so we will keep these on our studies request.
    - Measured tunes, coupling, and chromaticity at 150 Gev on the helices. Saw no large errors that would explain the proton lifetime problem.
    - On the owl shift, experts completed differential chromaticity measurements followed by TEL studies.
  - Tevatron experts will be ready to do the 1x1 store this morning.
- Requests:
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- **Recycler**
  - Summary:
    - Good day overtall
    - 435e10 record stash
    - Problem with horizontal cooling. Had to cut back signal to noise by 60% to get to cool.
    - When they got to 435e10, increased lifetime from 50 hours to 200 hours.
    - Still were able to cool down to 65eV-sec, transverse 4pi.
    - Between 2nd and 3rd bunch, the beam went unstable, so lost 70e10.
    - Would have mined out 95% of the beam
    - Would like to go back to high intensity!
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  - Requests:
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- **SY120**
  - Summary:
    - MIPP will continue to run with the analysis magnets off at high intensity.

intensity.
        - MTest will have varying intensity requests for 120 GeV protons depending on which group is in the driver's seat.
        - Next Monday may be off for test beam installation.
    - Requests:
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- **MiniBooNE**
    - Summary:
        - Running well.
        - Multiwires in 8GeV beamline need to be fiducialized. The only stand that has the right fixture is in MI12b. Usually eat about 16 hours when go in. We may be able to do this work during the low intensity running
    - Requests:
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- **NuMI**
    - Summary:
        - 4 day horns off run is complete
        - Collecting water samples
        - Will return to normal operation after access.
        - The horn #2 RAW problem still exists.
        - Jim Hylen will be coordinator over the weekend.
    - Requests:
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- **CDF**
    - Summary:
        - 4639 ran well - 88%
        - Had a single run and used run Iib trigger table.
    - Requests:
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- **D0**
    - Summary:
        - Ran at 87%
        - Multiple trips of calorimeter BLS power supply rack due to water flow indication.
        - Access to find problem. Found a bad impeller that was worn out. Replaced impeller and did not have any problems since then.
        - Ready for special run.
    - Requests:
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- **FESS**
    - Summary:
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    - Requests:
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- **Mechanical**
    - Summary:
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    - Requests:
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- **Cryo**
    - Summary:
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    - Requests:
        - M05 Access:
            - The reason for this work is to complete about 100 ft of tubing run to bring room temp He and N2 from Meson Refrig. to MDB. This is required for warming up Capture Cavity II SRF cryo module. Tim Koeth is waiting for this

warm-up in order to proceed with coupler conditioning. The urgency is this conditioning cannot procede until we warm-up. The job should take about 1 hr.

- During a recent shutdown, Cryo ran tubing through the tunnel from Meson Refrig to the "second gate" in as you go south from MDB. This originally defined the beam enclosure boundary. However, the rad safety rules have changed and the boundary was broadened so that the "first gate" in requires beam off now. Originally this was I believe for ODH enclosure definition only, and we planned on being able to access this ~100 ft of tunnel to finish the tubing job using ODH rules only.

- **Long Shutdown**
  - Summary:
    - 8 work days from shutdown.
    - Anyone wanting in on Monday, please send list to Mary Kohler
    - Need a list of people needing to get in Booster, MI/RR, Trevatron and Pbar the 1st few days of the shutdown. We need names and the 1st pass by 11am on Thursday. Send list to Mary
    - We need a list of people that would like permanent issued keys for the duration of the shutdown for MI and Booster, At the moment we are not looking at issuing permanent keys to the Tevatron and Pbar. Send list to Mary
    - Details of the chaos for the 1st 3 days of the shutdown will be unveiled Friday at the 9am meeting. Have the appropriate people come to the meeting at 1W.
  - Requests:
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- **The Plan**
  - Summary:
    - Put in special 1x1 store.
    - Hope to have enough Pbars to try again if we need to.
    - Pbar studies for two days.
  - Requests:
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